

## INDRAJEET CHAUBEY

Associate Dean and Director of International Programs, College of Agriculture  
Professor, Department of Agricultural and Biological Engineering  
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Purdue University  
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### ACADEMIC BACKGROUND

**Ph.D., Biosystems Engineering**, Oklahoma State University, Stillwater, 1997

**M.S., Biological & Agricultural Engineering**, University of Arkansas, Fayetteville, 1994

**B.S., Agricultural Engineering**, University of Allahabad, India, 1991

### Appointments

**Associate Dean and Director of International Programs**, College of Agriculture. May 2016-Present

**Professor and Head**, 2013- 2017. Department of Earth, Atmospheric, and Planetary Sciences, Purdue University, West Lafayette, IN

**Professor**, August 2011 – Present; **Associate Professor**: 2007 – 2011, Department of Agricultural and Biological Engineering; Department of Earth, Atmospheric, and Planetary Sciences; Purdue University, West Lafayette, IN

**Associate Director**, 2012-2015. Purdue Water Community

**Associate Professor**, 2005 – 2006; **Assistant Professor**: 2000 – 2005, Department of Biological and Agricultural Engineering, University of Arkansas, Fayetteville, AR

**Adjunct Professor**, 2002 – 2006, Environmental Dynamics Program, University of Arkansas

**Assistant Research Scientist**, 1998-2000. Center for Freshwater Studies, University of Alabama, Tuscaloosa, AL

### HONORS/AWARDS

- **Honorary Professor**, Qinghai Normal University. 2017.
- **Fellow**, American Society of Agricultural and Biological Engineers. Class of 2017.
- **Arkansas Academy of Biological and Agricultural Engineering**. Inducted, 2016
- **Fellow**, Indian Society of Agricultural Engineers. 2015
- **ADS/Hancor Soil and Water Engineering Award**. 2014. American Society of Agricultural and Biological Engineers
- **Agricultural Research Award. 2012**. Purdue University
- **Seed for Success Award. 2011**. Purdue University
- **University Faculty Scholar. 2011**. Purdue University

- **Outstanding Graduate Educator. 2010, 2012.** Department of Agricultural and Biological Engineering. Purdue University
- **First Place Award. 2010.** Southern Agricultural Economics Association for the poster presented at the Annual Conference. February 8, 2010. Orlando, FL
- **Award of Excellence. 2009.** 2-19<sup>th</sup> Agribusiness Development Team, Indiana National Guard
- **New Holland Young Researcher Award. 2007.** American Society of Agricultural and Biological Engineers
- **Outstanding Engineer Award. 2006.** Arkansas Section of the ASABE
- **Faculty Research Award of Merit. 2006.** Gamma Sigma Delta
- **ASAE Honorable Mention Paper Award. “Water quality at the Buffalo National River, Arkansas, 1991 – 2001”** published in the Transactions of the ASAE 44 (2). Out of 362 papers published by the ASAE, only 9 were selected for the Superior Paper Award and 9 for the Honorable Mention
- **Best Teacher Award. 2005.** Biological Engineering Student Club, University of Arkansas
- **Outstanding Researcher Award. 2002- 2003.** Department of Biological and Agricultural Engineering. University of Arkansas, Fayetteville
- **Graduate Research Excellence Award.** Oklahoma State University, 1997. Physical Sciences and Technology Group
- **Phoenix Award.** Oklahoma State University, 1997. Given to one Ph.D. and one M.S. student each year. I was the first Ph.D. student from the Department of Biosystems and Agricultural Engineering to get this award
- **Who’s Who in Agricultural Academia.** 2009
- **Merit Cum Means Scholarship,** Indian Council of Agricultural Research, 1986-1989

## **SELECTED ADMINISTRATIVE ACCOMPLISHMENTS/ACTIVITIES**

### **Associate Dean and Director of International Programs**

- Responsible for developing a broad vision of international dimensions of a leading 21<sup>st</sup> Century college of agriculture
- Communicate the vision to faculty, students, citizens of Indiana, and other stakeholders in national and international settings
- Develop new international opportunities in discovery, learning, and engagement
- Promote faculty collaborations across disciplines, facilitate new initiatives, and provide creative leadership to implement international programs in discovery, learning, and engagement
- Work closely with faculty, national and international programs, and private foundations to obtain funding necessary to implement and manage innovative programs
- Helped establish China-US Joint Laboratory for Natural Resources and Environmental Modeling - A joint collaboration between Purdue and Qinghai Normal University.

### **Department Head:**

- Recruited 12 new faculty since 2013 including five women faculty to the department. Hired 14 new staff members since 2013
- Diversity in the department increased in many areas; EAPS currently has 6 female faculty – the largest number in history. A historically highest percent of female undergraduate (43%) and

graduate students (49%) in the department. Largest number of Native American graduate students among any Ph.D. granting earth science programs in the USA

- Led the creation of professional M.S. degree in Geodata Science. The program will be launched in Fall 2018.
- Led the development of a new strategic plan (2015-2019) for the department
- Led the successful external review of the department (2014)
- Student credit hours taught by EAPS faculty increased from <6,000 (2012) to more than >10,000 (2017) each semester
- Initiated energy and environment research; and extreme weather – two new research themes in the department
- Encouraged and supported faculty to participate in IMPACT and on-line digital education program development. EAPS faculty teach top two most enrolled classes supported by Purdue Digital Education
- Oversaw revision of undergraduate curriculum
- Philanthropic giving increased to more than >\$1 million each year. Six new endowed scholarships created by friends and alumni of the department
- First endowed professorship (Stephen and Karen Brand of Unconventional Energy) created in the department with a total endowment of \$2 million. Successfully hired the inaugural chair to fill this position.
- Second endowed professorship created in 2017 (Gerald and Sherry Krockover Rising Star Chair of Earth and Planetary Science Education).

### **Chair of Graduate Programs**

- Purdue University
  - Graduate program in Agricultural and Biological Engineering was ranked number 1 by the U.S. News and World Report during my tenure as the Graduate Chair
  - Develop Graduate Student Learning Outcomes (GSLO) for the department
  - Collected, analyzed, and presented data related to GLSO and proposed initiatives to improve learning outcomes
- University of Arkansas
  - Revised the graduate curriculum of the department.
  - Authored a proposal to start a new M.S. degree in the department.
  - Graduate enrollment in the department quadrupled during my tenure as the graduate program chair

## INTERNATIONAL PROGRAMS ACTIVITIES

- I have developed active international collaboration with scientists from China, Colombia, Germany, India, Mexico, South Korea, Taiwan, Panama, and Peru. Currently I am working on the following projects with these collaborators:
  - Impact of climate change on water availability and water quality in agricultural watersheds
  - Development of methods and tools to improve uncertainty analyses in watershed models
  - Development of methods to improve flow and water quality predictions in ungauged basins
- I have led, and participated in research proposal development with collaborators from multiple countries including China, India, Colombia, Canada, Mexico, and Panama. For example, I am co-leader of a large interdisciplinary project with the National University of St. Augustine to develop an Institute for Food, Water, Energy, and Environment Nexus in Arequipa. I led a discussion and presented a proposal to the Indo-U.S. Science and Technology Forum Team on water and climate related issues. Purdue University. June 19, 2008. As a direct outcome of this meeting, I was invited to submit a proposal to create a virtual center.
- International Director, Indian Society of Agricultural Engineers. 2012-2014
- I have travelled with Purdue teams to multiple countries (Australia, China, Colombia, Haiti, India, Mexico, Panama, Peru) with a goal to develop new institutional collaborations. These efforts have led to development of new collaborations, establishment of joint research centers and programs, and faculty and student exchanges.
- I have provided leadership to various international scientific conferences, including
  - Technical Program Advisory Committee, Environmental Water Resources Institute of the American Society of Civil Engineering
  - Technical Program Committee, International SWAT Conference – (2011, Toledo Spain; 2012, New Delhi India; 2013 Toulouse, France; 2014 Perambuco, Brazil, 2015 West Lafayette, USA; 2016 Beijing, China; 2018 Madras, India).
- I was invited to attend the Joint US-China Workshop on Climate-Energy Nexus where I presented a talk entitled “Environmental Impact Assessment of Biofeedstock Production in the USA”. Subsequently, I was invited to travel to China in 2011, 2012, and 2016 to continue discussion on furthering collaborations with Chinese counterparts on this project.
- Chair, International Conference on Global Water Security, to be held on October 3-6, 2018, in Hyderabad, India.

## PROFESSIONAL AFFILIATIONS

- **Member**, ASAE (*Society for Engineering in Agricultural, Food, and Biological Systems*); American Water Resources Association; Soil and Water Conservation Society; American Geophysical Union; Gamma Sigma Delta (*The Honor Society of Agriculture*); Alpha Epsilon (*Agricultural Engineering Honor Society*)

## RESEARCH ACTIVITIES

Lack of clean water to meet society's needs is recognized as one of the major challenges of modern times by the National Academy of Engineering. My career goal is to improve water quality and watershed management by integrating field data collection and mathematical modeling, and developing simulation models and tools that will guide policy decision makers. My research program integrates simulation modeling and innovative field research to improve our understanding of various rainfall-runoff and pollutant transport processes at field, stream reach and watershed scales.

My current research activities include evaluation of land use, land management and climate change impacts on ecohydrology and water quality of agricultural watersheds. My research projects are focused on developing methods and tools that can be used by various stakeholders to solve complex watershed management problems. These projects are aligned with current priorities of many of the state and federal agencies for improving agricultural food production, water quality, ecosystem services, and mitigating/adopting to climate changes. I collaborate with faculty from several universities, government and non-government agencies, and national laboratories in U.S., Canada, Asia, Europe, and South America. The following research programs are currently underway at Purdue University:

1. Impact of increased biomass for biofuel production on ecohydrology and water quality in Midwestern watersheds – U.S. has set a goal of producing 36 billion gallons of biofuels by 2022. Meeting this goal will require significant land use changes in near future. Very little scientific information is currently available documenting impact of land use changes to support biofuel production on water availability and water quality. My research program has been funded by Department of Energy (DOE) and USDA to comprehensively evaluate how biofuel production will affect water quantity/quality and what watershed management decisions can be taken to ensure sustainable bioenergy crop production.
2. Developing methodology to evaluate best management practice effectiveness in agricultural watersheds – EPA has set a goal of reducing hypoxia in the Gulf of Mexico by two third. Similar nutrient reduction goals are also set for the Great Lakes. Accomplishing these goals will require substantial reductions in nutrient losses from agricultural watershed in the Midwest USA. My research group is leading multiple projects funded by EPA and USDA to develop a BMP optimization tool and methods that can be used to control nonpoint source pollution in agricultural and mixed land use watersheds that will reduce pollutant losses from the Mississippi River basin and the Great Lakes basins.
3. Quantification of ecosystem services in mixed land use watersheds – Sustainability of US agriculture and environment will require evaluating ecosystem services and managing watersheds to maximize various services supported by mixed land use watersheds. I am developing methods to quantify ecosystem services at watershed scale that can be used to make watershed management decisions.
4. Impact of climate change on ecohydrology and water quality of agricultural watersheds – I am working on research projects to comprehensively evaluate linkages between climate change and agricultural production in the Midwest USA and developing strategies to mitigate climate change impacts.
5. Development of decision support systems (DSS) that can be used to manage agricultural watersheds for nonpoint source pollution control. The DSS development activities also include development of new methods and models (both conceptual and system theoretic), and quantification of uncertainties in model parameters and results so that these uncertainties can be incorporated in watershed management decision process.

## TEACHING ACTIVITIES

**Teaching Accomplishments:** My contribution to teaching include developing new undergraduate and graduate courses, mentoring of graduate students and post-doctoral research associates, involving undergraduate students in my research projects, and integrating innovating pedagogical methods that integrate my research into classes. At Purdue University I have developed and taught new courses (ABE 591C/EAS 591N: Future of Water Resources; ABE 591S: Ecohydrology; and ABE 591F: Nonpoint Source Pollution Engineering) and have significantly revised an existing course (ABE 527: Computer Modeling in Environmental and Natural Resources). I have supervised research work of 30 graduate students (18 M.S. and 12 Ph.D.). My teaching goals include the following:

### **1. Preparation of motivated professionals in the area of environmental and natural resources**

I believe in ‘active learning’ style of teaching, combined with the introduction of real world problems in the classroom, and exposure to field and laboratory research work. In all of my classes, I employ active learning pedagogy by engaging students in discussions on engineering problem formulations and potential solutions. My classes utilize project-based learning where students work on a project involving contemporary engineering problems related to the course. Project based learning helps the students translate textbook knowledge into the solutions of practical engineering problems. I have contributed to the life-long learning of practicing professionals by developing and teaching short courses and workshops and presenting at colloquium/seminar series organized by students. I actively seek grant funding to develop innovative teaching methods. I have integrated instruments/equipment for field and laboratory data collection, simulation models, and cyber-infrastructure to describe how land use/land management influences water availability, and water quality.

### **2. Development of undergraduate and graduate curriculum to prepare tomorrow’s leaders**

At Purdue University, I have taken a leadership role in developing Graduate Student Learning Outcomes (GSLO) by preparing mapping guides and rubrics that document learning objectives for both M.S. and Ph.D. students in the Department of Agricultural and Biological Engineering. I have analyzed GSLO data, preparation of reports, and discussion with the faculty on how weaknesses found related to specific learning outcomes can be addressed. As a member of the Curriculum Committee in the EEE, I have developed undergraduate curriculum for a new degree in EEE at Purdue. I have also worked with agricultural and biological engineering faculty to develop a new minor in EEE. As a member of the Advisory Committee, I have actively participated in the undergraduate curriculum revision of the Natural Resources and Environmental Science program in the College of Agriculture at Purdue.

### **3. Provide research opportunities to undergraduate students**

More than 25 undergraduate students have worked in my laboratory. Three of those students have published their research findings in peer-reviewed research journals.

### **4. Motivate students to realize their career potentials and goals**

I am committed to the professional development of my students. I have been engaged with students both inside and outside of classrooms striving to motivate them to achieve their career goals. I consider my students’ success as my own. 13 of my graduate students have won prestigious honors and awards. Numerous students have participated in publications in peer-reviewed journals, along with student presentations at various international, national, and regional conferences.

## Courses Taught

Course #	Title	Institution	No. of times taught
ABE591C <sup>1</sup>	Ecohydrology	Purdue	4
ABE 529 <sup>1</sup>	Nonpoint Source Pollution Eng.	Purdue	3
ABE591C/EAS591N <sup>1</sup>	Future of Water Resources	Purdue	1
BAST 2903	AGHE Appl. Micro Computers	U. Arkansas	2
BENG 2612	Design in Biological Engineering II	U. Arkansas	1
BENG4903	Natural Resources Engineering	U. Arkansas	3
BENG 4923 <sup>1</sup>	Nonpoint Source Pollution Engineering	U. Arkansas	2
BENG 5613 <sup>1</sup>	Modeling and Simulation	U. Arkansas	1
BENG 5923 <sup>1</sup>	NPS Pollution Control and Modeling	U. Arkansas	3
BENG 450(v)	Special problems (Undergraduates)	U. Arkansas	3
BENG 500(v)	Special Topics (Graduate)	U. Arkansas	3

<sup>1</sup>New courses that were developed and taught by Dr. Chaubey

## Short courses and workshops taught.

1. **Introduction to geographic information system (GIS) applications in engineering.** A three-hour workshop at the 2002 meeting of the Arkansas Section of ASAE. Number of participants = 35.
2. **Managing Animal Resources for Environmental Quality.** 2002. No. of Participants = 14.
3. **Introduction to GPS and GIS for Engineers.** University of Arkansas Cooperative Extension Service. 2002. Number of participants = 24.
4. Three workshops in Arkansas on **Soil and Water Assessment Tool.** 2004. Total number of participants = 100.
5. **BMP optimization using SWAT model and genetic algorithms.** Purdue University. April 2010. Total number of participants = 12.
6. **Load estimation tools.** Indiana Department of Environmental Management. Co-taught with Dr. J. Frankenberger. September 13, 2010. Total number of participants = 15.

## Masters Thesis Directed (student name, thesis title, year graduated)

1. Amy S. Cotter, Analysis of input data resolution for TMDL development. 2002
2. Debabrata Sahoo, Assessment of nutrient transport and dynamics in agricultural dominated streams. 2003
3. Sumit Sen, Quantification of internal phosphorus loading in the Beaver Lake, Northwest Arkansas. 2004

4. Richa Srivastava, A statewide modeling approach to quantify nutrient losses in Arkansas. 2006
5. Mansoor Leh, Differentiating runoff contributing areas in an Ozark watershed. 2006
6. Nitin Singh, Effect of diffuse light on remote sensing of water quality constituents. 2007
7. Brian Schaffer, Integrated assessment of water quality/water quantity issue in the L'Anguille River watershed. 2007
8. Chetan Maringanti, Multiobjective optimization of BMPs in agricultural watersheds. 2007
9. Katie Merriman, Quantification of nutrient dynamics in agricultural drainage ditches. 2008
10. Laurent Ahiablame, Nutrient attenuation under natural conditions in agricultural streams. 2009
11. Elizabeth Trybula, Water quality impact of perennial crop production, 2012. (Co-Advised with Dr. Jane Frankenberger, Department of Agricultural and Biological Engineering).
12. Rebecca A. Logsdon. Development of methods to quantify ecosystem services. 2011.
13. Salah Issa. Evaluating Hybrid-Maize model in rainfed conditions in Northwestern Indiana. 2012. (Co-advised with Dr. Sylvie Brouder, Department of Agronomy).
14. Qingyu Feng. Biomass production and hydrological/water quality impacts of perennial crop production on marginal lands. 2013.
15. Erin Chicklowski. Nitrate removal from subsurface drainage by denitrifying bioreactor. 2014.
16. Amanda Montgomery. (Co-Advised with Dr. Sylvie Brouder). Water quality and production potential impacts of cellulosic biofuel crops grown on marginal lands. 2015.
17. Amanda Brock. Evaluating impact of wood chip bioreactor on phosphorus loads. 2016.

**Doctoral Dissertations Directed** (student name, dissertation title, year graduated)

1. Vijay Garg, Development of a physically-based Monte Carlo model for lake water quality assessment. 2006
2. Kati L. White, Integrating watershed, stream, and lake water quality models for water quality management. 2004
3. Eylem Mutlu, Neural Network and Statistical Modeling for DSS Development. 2006
4. Li-Chi Chiang, SWAT modeling to evaluate BMP performance in a CEAP watershed. 2010
5. Chetan Maringanti, Develop of multiobjective optimization techniques for BMP selection. 2010
6. Laurent Ahiablame. Development of methods for modeling and evaluation of low impact development practices at the watershed scale. 2012. (Co-Advised wit Dr. Bernard Engel)
7. Cibin Raj, Impact of biofuel production on watershed scale water quality. 2013
8. Margaret McCahon Kalcic, Development of methods to site various best management practices for water quality improvements. 2013
9. Rebecca Logsdon, Quantifying ecosystem services in mixed land use watersheds. 2014
10. Qinyu Feng. Hydrology and water quality impacts from biofuel production on marginal lands. 2015 (Expected)
11. Garrett Pignotti. Evaluating remote sensing soil moisture products on water quality model predictions in mixed land use watersheds. 2018 (Expected)
12. Femeena P.V. Improving nutrient transport simulation in SWAT by developing a reach scale waer



quality model using tracer studies. 2019 (Expected)

13. Ping Li. Land use and climate change impacts on ecosystem services in mixed land use watersheds. Northwest Agricultural University of Forestry and Agriculture, China. 2017.

### Graduate Student Awards

The following selected list of student accomplishments, **working under my supervision**, illustrates my dedication toward their best professional development.

- a. **Various Awards in student competitions.** I work very closely with my students to nominate them for various awards or help prepare presentations/posters for these competitions.

- i. First Place in ASABE Student Presentation Competition. 2017. (Garrett Pignotti)
- ii. **First Place** in ASABE Student Ethics Video Challenge. 2016. (Femeena, V.)
- iii. **First Place** in the poster competition in the 2013 AWRA Specialty Conference on Agricultural Hydrology and Water Quality. St. Louis, MO. (M. Kalcic)
- iv. **First Place** in the poster competition in the 2012 ESE Symposium, Purdue University (M. Kalcic)
- v. **Second Place** (G. Pignotti) and **Third Place** (Q. Feng) in the 2012 GIS Day Poster Competition, Purdue University
- vi. **Outstanding Graduate Student Award.** 2012. (Laurent Ahiablame)
- vii. **2012 Emily M. Wadsworth Graduate Mentoring Award.** Given by Purdue Women in Engineering (R. Logsdon)
- viii. **Third Place** in the poster competition in the 2011 ESE Symposium Poster Competition, Purdue University. November 9, 2011. (E. Trybula and R. Cibin)
- ix. **Robert E. Stewart Engineering Humanities Award.** American Society of Agricultural and Biological Engineering. 2011. (Rebecca Logsdon)
- x. **First Place** Award by the Southern Agricultural Economics Association for the poster presented at the Annual Conference. February 8, 2010. Orlando, FL. (German Rodriguez and Chetan Maringanti)
- xi. **First place** in the poster competition in the Annual conference of the Center for the Environment, Purdue University. 2008. (Mark Thomas)
- xii. **First place** in the **national student paper competition** in Ph.D. category (Mark Thomas) and **third place** in the M.S. category (Chetan Maringanti), organized by the American Society of Agricultural and Biological Engineering. 2008. (Mark Thomas)
- xiii. **First place** in the 2<sup>nd</sup> Annual Technology Summit Research Symposium: Poster Contest. (Vijay Garg)
- xiv. **Second place** (Kati White) and **Third Place** (Debabrata Sahoo) in student poster competition in the 2003 annual conference of the Arkansas Section of the ASAE.
- xv. **First place** in student presentation competition at the 2002 Annual Conference of Arkansas Water Works and Water Environment Association. (Amy Cotter).

- b. **Fellowships and Scholarships.**

- i. **National Science Foundation** Graduate Research Fellowship (Rebecca Logsdon), Honorable Mention, NSF GRF (Margaret McCahon)
  - ii. **Ivanhoe Foundation Scholarship.** This scholarship is given to only one international graduate student on any university campus. (Laurent Ahiablame was the first student from Purdue to get this fellowship in 2008. Richa Srivastava, 2006).
  - iii. **Bilsland Dissertation Fellowship** (R. Cibin)
  - iv. **Magoon Excellence in Teaching Award, 2012** (M. Kalcic)
  - v. **Ph.D. Fellowship** (Margaret McCahon, Rebecca Logsdon)
  - vi. **Southern Regional Education Board Fellowship** (Mansour Leh)
  - vii. **W.R. Thomas Fellowship** in Engineering. (Vijay Garg and Mansour Leh)
  - viii. **Gentry Land and Water Scholarship** awarded by Arkansas Water Resources Center (AWRC). (Kati White)
  - ix. **Randall Mathis Scholarship** awarded by Arkansas Environment Federation. (Kati White).
- c. **Research Grants.** The following students working under Dr. Chaubey's supervision have successfully authored externally funded research proposals (*student name, funding agency*)
- i. Cibin Raj: Indiana Corn Marketing Council
  - ii. Laurent Ahiablame, NSF; Hydrologists Helping Others (H2) – Purdue University; India Illinois Sea Grant; EPA
  - iii. Vijay Garg, Arkansas Space Grant Consortium
  - iv. Kati White, USGS
  - v. Rebecca Logsdon, Margaret M. Kalcic, and E. Trybula, North Central Region-Sustainable Agriculture Research and Education (NCR-SARE) Program

## **SERVICES AND PROFESSIONAL ACTIVITIES**

A foundation of any Land Grant University is service to the community. I have a deep sense of commitment to serving the community through my discovery, learning, and engagement. I have served on a number of committees at the department, college and university levels. In addition, I have served in a leadership role in a number of national committees and professional societies. My significant service contributions are summarized below.

### **Major committee assignments in the Department, School, and/or University**

- **Search Committee** for the Head of Department of Statistics. 2015
- **College of Agriculture, Facility Planning Committee.** Purdue University. 2011 – 2012.
- **Junior Faculty Council, College of Engineering,** Purdue University. 2007-2010. The JFC is a group of assistant and associate rank faculty that meets periodically with the Dean to provide input and advice on environment and academic issues of particular concern to junior faculty

- **Graduate Committee**, Agricultural and Biological Engineering, Purdue University. 2007 – 2012.  
**Chair, 2012 -2013**
- **Search Committee** for the Head of the Division of Environmental and Ecological Engineering, Purdue University. 2007-2008
- **Program Advisory Committee**, Geospatial Engineering and Surveying, Purdue University. 2007-present
- **Division of Ecological and Environmental Engineering**, Purdue University. Dr. Chaubey has spent 25% of his time in DEEE since Fall 2008 to develop a teaching and research program in DEEE
  - **Executive Committee**. 2008-present
  - **Curriculum Committee**. 2009-2010
  - **Faculty Success Committee, Chair**. 2011-2013
- **Governance Committee**, Ecological Sciences and Engineering, Purdue University, 08/2008 – present
- **Advisory Committee**, Natural Resources and Environmental Sciences, College of Agriculture
- **University of Arkansas**
  - **Chair, Graduate Committee**, Department of Biological and Agricultural Engineering, University of Arkansas. 2005 – 2006
  - **Ecological Engineering Committee**, Department of Biological and Agricultural Engineering, University of Arkansas. 2002 – 2006. **Chair**, 2000-2003
  - **Academic Matters and Curriculum Committee**, Department of Biological and Agricultural Engineering, 2002 – 2006. Worked with other faculty members to prepare ABET materials. This involved extensive review of course materials, educational outcome assessment, and document preparation. Worked with other faculty members to revise BENG curriculum, including review of credit hours required for degree in BSBE, review of required and elective courses, sequencing of course offerings, and revision of some of the course materials (e.g., BENG 4903: Natural Resources Engineering)
  - **Teaching Quality Committee**, Department of Biological and Agricultural Engineering, University of Arkansas. 2002 – 2006
  - **Faculty Advisor**, Friends of India. University of Arkansas. 2001-2002
  - **Library Committee**, University of Arkansas. 2000-2004
  - **CAFLS Computer and Technology Transfer Committee**. University of Arkansas., 2000-2006
  - **College of Engineering COOP Committee**, University of Arkansas. 2000-2005
  - **Computer Committee**, Department of Biosystems and Agricultural Engineering, Oklahoma State University, 1996-1997
- **Library Advisory Committee**, Oklahoma State University, 1994-1995

## Service to government or professional organization

### *Professional Organizations*

- **Committees of the American Society of Agricultural and Biological Engineers:**
  - **Member, M152, ADS/Hancor Soil and Water Engineering Award Committee.** 2013-2018
  - **Member,** Membership Development Council. 2011-2013
  - **Member, M-114, New Holland Young Researcher Award Committee.** 2008-2010. **Chair,** 2010
  - **Chair, SW-01: Executive Committee** (Soil and Water Division), 2010-2011
  - **Secretary, SW-02: Steering Committee** (Soil and Water Division), 2008-2009. **Chair,** 2010-2011. As a chair of the committee, Dr. Chaubey was responsible for all abstract submission and organizing all oral and poster sessions in the Soil and Water Division in the International ASABE conference in 2010 (19 different sessions with a total of 120 presentations)
  - **Vice-Chair, SW-21** (Hydrology Group), 2003 – 2005. **Chair,** 2006-2008
  - **Founding President, Association of Agricultural, Food, and Biological Engineers of Indian Origin.** 2009-2011
  - **Member, SW-21** (Hydrology Group), SW-22, SW-223 (Soil Erosion Research), and SW 224 (Pollution by Erosion) Committee, 1997-present
- **Associate Editor,** Transactions of the American Society of Agricultural and Biological Engineers; Applied Engineering in Agriculture, 2008-present
- **Co-Chair,** International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015
- **Steering Committee and Chair of Publications.** ASABE 1<sup>st</sup> Climate Change Symposium-Adaptation and Mitigation – Chicago, Illinois, May 3-5, 2015
- **Steering Committee member and Co-Editor of the proceedings.** 2010 TMDL Conference organized by the ASABE. Responsible for all abstract and full length paper submissions, review of abstract and proceeding papers, and communicating with the authors (a total of 75 abstracts and papers)
- **Chair, Arkansas Section of the ASABE. 2004-2005**
- **Vice-Chair of Professional Development,** Arkansas Section of ASAE, 2001-2004
- **Review Panelist:** National Science Foundation (NSF 2003, 2004, 2005, 2008, 2009, 2015); USDA-ARS (2010, 2011, 2016); USDA-NRI (2005); USGS-104b (2004, 2005) and 104g programs (2004, 2005)
- **Chair** of technical sessions in various conferences such as Arkansas Water Resources Conference (2002), Annual Conference of ASAE (2001, 2003, 2004, 2005, 2006, 2007), and annual conference of American Water Resources Association (1998)

### *Direct Service to People, Communities and Other Client Groups*

- I work with a number of state and federal agencies to solve water quality problems that are regional and national in scope. As a member of the Environmental Task Force created by the University of

Arkansas – Division of Agriculture to address environmental health of Arkansas, I devoted a significant amount of his time to solving complex environmental problems affecting economic development of the region. My efforts with the Eucha/Spavinaw watershed located in Arkansas and Oklahoma (involving 1076 km<sup>2</sup> in area, approximately 1,000 agricultural producers and more than 300,000 people relying on Lake Eucha/Spavinaw for their drinking water) provided a foundation for the federal court to lift a moratorium on poultry litter application in the watershed. (Case No. 01 CV 0900 EAI)

- I have organized numerous workshops to train state agency personnel on using various mathematical models in assessing watershed land use impact on water quality
- I have worked with various stakeholder groups, such as Audubon Arkansas, Washington County Conservation District to develop a participatory approach for issue identification, problem solving, and watershed management plan development for nonpoint source pollution control

## FUNDED RESEARCH PROJECTS

### Summary of External Funding

#### *Principal Investigator*

Federal:	\$5,893,608
Non-federal/Other:	\$468,624

#### *Co-Principal Investigator*

Federal:	\$8,502,651
Non-federal	\$395,130

1. **Chaubey, I.** Global water security for agricultural production and natural resources. USDA-NIFA. \$50,000. 2018-2019.
2. **Chaubey, I.** A grid-based modular watershed model for landscape-river continuum. Texas A&M University. \$30,000. 2016-2017.
3. Filley, T., and **I. Chaubey.** Critical Zone Observatory for Intensively Managed Landscape (IML-CZO). \$234,791. University of Illinois. 2013-2016.
4. Frisbee, M., and **I. Chaubey.** What is the source of baseflow in the Wabash River watershed. Indiana Water Resources Center. \$15,000. 2015-2016.
5. **Chaubey, I.,** B. Gramig, and R. Cibin. Watershed scale analysis to develop strategies for environmentally sustainable corn stover removal for biofuel production in Indiana. Indiana Corn Marketing Council. \$44,114. 2014-2015.
6. Cherkauer, K. and **I. Chaubey.** Quantifying the optical properties of Wabash River water using remote sensing. Purdue Water Community, Water Drops Program. \$6,000.
7. Cherkauer, K. and **I. Chaubey.** Unmanned Aerial Vehicle for environmental monitoring. Purdue Laboratory Research Equipment Program. \$80,750. 2012-2013.
8. Volenec, J., R. Turco, S. Brouder, **I. Chaubey,** et al. Sustainable production and distribution of bioenergy for Central USA. USDA-NIFA. \$3,686,569. Part of \$25 million project funded through Iowa State University. 2011-2016.
9. Buckmaster, D., A. Ault, **I. Chaubey,** B. Engel, J. Frankenberger, and J. Krogmeier. Mobile computing technologies to enable more efficient and in-field water management decisions. USDA-NIFA. \$395,000. 2011-2015.

10. Bowling, L., **I. Chaubey**, J. Frankenberger, and R. Goforth. Demonstrating nitrogen treatment effectiveness through innovative bench wetland system. NRCS Conservation Innovation Grant. \$217,778. 2011-2014.
11. **Chaubey, I.**, L. Bowling, S. Brouder, K. Cherkauer, B. Engel, J. Frankenberger, R. Goforth, B. Gramig, P. Murphy, and J. Volenec. DOE. \$1,991,177. 2011-2014
12. **Chaubey, I.**, Rao S. Govindaraju, D. Niyogi, and C.X. Song. Development of drought triggers of agricultural applications. USDA-NIFA. \$492,797. 2011-2013.
13. Frankenberger, J., **I. Chaubey**, and B. Engel. Adaptive management to increase adoption rates of emerging nutrient management and load reduction practices. NRCS Conservation Innovation Grant. \$118,357. 2010-2012.
14. **Chaubey, I.**, B. Engel., J. Frankenberger, and V. Merwade. Cumulative impacts of BMP implementation in the Maumee River basin. GLRI. \$497,486. 2010-2013
15. Cherkauer, K., **I. Chaubey**, and C. Troy. Monitoring episodic river inflow plumes using in-situ and remote sensing data. Indiana-Illinois Sea Grant Consortium. \$300,000. 2010-2012
16. Engel, B., K. Cherkauer, and **I. Chaubey**. Army Corps of Engineers 516(e): The Great Lakes Tributary Modeling Program. USACE \$205,000. 2010-2012.
17. **Chaubey, I.**, L. Bowling, K. Cherkauer, R. Goforth, R. Mohtar, S. Hoffman. Preparing tomorrow's leaders to tackle complex water quality problems through enhanced field experiment capabilities at Purdue. Instructional Innovation Grant. Purdue University. \$27,500. 2010-2011.
18. Goforth, R.R., L. Prokopy, and **I. Chaubey**. Promoting sustainability within the context of maximizing Indiana's competitive advantage in agriculturally derived energy. Purdue University, ARP – Mission Oriented Grant Program. \$24,969. 2010-2012.
19. Tyner, W.E., S.M. Brouder, and **I. Chaubey**. Integrated economic, environmental, and technical analysis of sustainable biomass energy systems. USDA-NIFA. \$174,966. 2010-2011.
20. **Chaubey, I.**, Engel, B., P. Murphy, and D. Saraswat. Impact of biofeedstock production on hydrology/water quality in Midwest and Southeast USA. USDA-CSREES. \$300,000. 2009-2012.
21. Pijanowski, B., T. Hook, M. Sepulveda, R. Goforth, J. Dukes, H. Rowe, P. Zollner, G. Shao, H. Zhang, O. Rhodes, C. Troy, V. Merwade, K. Cherkauer, **I. Chaubey**, R. Swihart, B. Engel, and S. Rao. Fellowship program in Ecology and Environmental Engineering. U.S. Department of Education. \$522,624. 2009-2013.
22. Hook, T., **I. Chaubey**, K.A. Cherkauer, B.C. Pijanowski, L.S. Prokopy, and C.D. Troy. Interactive effects of climate change and land use on Indiana's glacial lakes. Discovery Park – Purdue University. \$44,048. 2009-2010.
23. Cherkauer, K., and **I. Chaubey**. Remote sensing of water quality parameters in the Wabash River. Indiana Water Resources Center and USGS. \$15,000. 2009-2010.
24. Song, X.C., J. Carlson, R. S. Govindaraju, C. Hoffman, D. Niyogi, **I. Chaubey**, and L. Zhao. INTEROP: Developing community-based drought information network protocols and tools for multidisciplinary regional scale applications (DRInet). NSF 750,000. 2008-2011.
25. Engel, B. and **I. Chaubey**. Web-based load-duration curve for TMDL. USGS. \$95,160. 2008-2009.
26. Engel, B., **I. Chaubey**, R. Farnsworth, and J.G. Hunter. Web-based low impact development decision support and planning tool. USGS. \$76,472. 2008-2010.
27. Engel, B., D. Dodenhammer, N. Devadasan, and **I. Chaubey**. Development of water quality

- decision support tools using service oriented architecture (SOA) and web 2.0 development approach. Intercampus Applied Research Program. \$50,000. 2008-2009.
28. Engel, B., M. Arabi, J. Frankenberger, **I. Chaubey**, and J. Lee. Multiobjective watershed management support system for spatial allocation of agricultural management practices. USDA-CSREES. \$550,000. 2007-2010.
  29. **Chaubey, I.** and L. Bowling. Quantification of sediment nutrient interactions as affected by drainage ditch management. Indiana Water Resources Research Center. \$18,500. 2007-2008.
  30. **Chaubey, I.** and V. Merwade. Ecohydrology: A new class and cyber-field trip module for DEEE students. Division of Environmental and Ecological Engineering, Purdue University. \$6,000. 2007.
  31. **Chaubey, I.**, M. Gitau, and P. Tacker. Identification of NPS pollution sources and BMP evaluation in 11-digit HUCs in the L'Anguille River watershed. Arkansas Natural Resources Commission. \$81,034. 2006-2008.
  32. **Chaubey, I.**, J.H. Popp, and B. Kurz. Effectiveness and optimization of BMPs in improving water quality from an agricultural watershed. USDA CSREES (CEAP). 2005 – 2008. \$650,000.
  33. **Chaubey, I.**, S.G. Bajwa, and M.D. Matlock. Environmental resource management to develop watershed technologies and management tools. EPA, Region 6. 2005-2008. \$148,800.
  34. **Chaubey, I.** and M.D. Matlock. Watershed Response Modeling in 11-digit Arkansas Priority Watersheds. Arkansas Natural Resources Commission. 2005-2006. \$75,124.
  35. **Chaubey, I.**, M.D. Matlock, and R.A. Morgan. GIS database development and watershed modeling in the Arkansas priority watersheds. Arkansas Soil and Water Conservation Commission. 2004 – 2005. \$60,671.
  36. **Chaubey, I.**, M.D. Matlock, and R.A. Morgan. SWAT modeling in the Illinois River watershed. Arkansas Soil and Water Conservation Commission. 2004 – 2005. \$30,500.
  37. Matlock, M.D., **I. Chaubey**, and R.A. Morgan. Update of Arkansas Nonpoint Source Pollution Management Program. Arkansas Soil and Water Conservation Commission. 2004 – 2005. \$151,906.
  38. **Chaubey, I.**, M.D. Matlock, E.D. Vories, and J. Popp. Development of an integrated water quality – water conservation program in the Arkansas Delta. USDA, National Integrated Water Quality Program. 2003 – 2006. \$550,000.
  39. **Chaubey, I.**, M.D. Matlock, T.A. Costello, and B.E. Haggard. Sustainable Agriculture and water resource in Arkansas: A bioenvironmental engineering solution. EPA Region 6. 2003 – 2006. \$446,100.
  40. **Chaubey, I.**, B.E. Haggard, and P. Srivastava. Differentiating runoff contributing areas for effective water quality management. USDA-NRI. 2003 – 2005. \$75,000.
  41. **Chaubey, I.**, M.D. Matlock, T.A. Costello, and B.E. Haggard. GIS database development and watershed modeling in Arkansas Priority Watersheds. 2003 – 2004. Arkansas Soil and Water Conservation Commission. 2003- 2004. \$85,184.
  42. **Chaubey, I.** and V. Garg. Use of hyperspectral remote sensing in lake water quality modeling. NASA/Arkansas Space Grant Consortium. 2003 – 2004. \$5,500.
  43. Bajwa, S.G., **I. Chaubey**, and D.R. Gardisser. Pesticide pollution risk assessment and mitigation training in Arkansas Delta. EPA Region 6. 2003- 2005. \$41,995.
  44. **Chaubey, I.**, K. White, T.A. Costello, and B. Haggard.. Development of techniques for identifying

- and linking physical characteristics to surface runoff source areas. USGS/AWRC. 2003-2004. \$14,838.
45. **Chaubey, I.**, B.E. Haggard, M. Matlock, C.V. Maxwell, and P.A. Moore, Jr. Quantification of pathogen losses from swine manure treated fields under chemical and dietary modification conditions. USDA/National Center for Manure and Animal Waste Management. 2002 – 2004. \$12,345. Supplement to this grant. \$22,842.
  46. **Chaubey, I.**, M. Matlock, T.A. Costello, and B.E. Haggard. Development of a Decision Support System and Data Needs for the Beaver Lake Watershed. EPA/Arkansas Soil and Water Conservation Commission. 2002 – 2005. \$269,973.
  47. **Chaubey, I.** Differentiating Runoff Contributing Areas from Pastures for Phosphorus Management. Research Incentive Grant. D.B. College of Agriculture, Food and Life Sciences. 2002 – 2003. \$9,997.
  48. Matlock, M. (P.I.), **I. Chaubey**, B.E. Haggard, D. Storm, M. Smolen, and W. Focht. A Nutrient Management Decision Support System for the Eucha Basin. Nutrient Science for the Improved Watershed Management Program, USDA/EPA. 2002 – 2005. \$686,000.
  49. Haggard, B.E. (P.I.), M. Matlock, **I. Chaubey**, and P.A. Moore, Jr. Phosphorus Concentrations and Flux in Streams and Reservoirs: Effect of Chemical Amendments on Sediment Phosphorus Flux and Implications for Watershed Management Strategies. USGS/Arkansas Water Resources Center. 2002 – 2003. \$24,812.
  50. Dillahunt, W., **I. Chaubey** and M. Matlock. Quantification of Dissolved Oxygen, Nutrients and Other Water Quality Parameters as Affected by Agricultural and Urban Land Use. Undergraduate Research program. DBCAFLS. \$450.
  51. **Chaubey, I.**, M.A. Nelson, T.A. Costello, and K. Teague, and K. VanDevender . Optimizing BMPs, Water Quality and Sustained Agriculture in the Lincoln Lake Watershed. EPA/Arkansas Soil and Water Conservation Commission. 2001 – 2004. \$272,713.
  52. **Chaubey, I.**, T.A. Costello, M.A. Nelson, and T.S. Soerens. Critical evaluation of spatial and temporal data requirements for TMDL Development. USGS/Arkansas Water Resources Center. 2001 – 2002. \$20,305.
  53. Bonzongo, J.J., E.E. Roden, H.C. Bryan, W.B. Lyons, **I. Chaubey**, and G.M. Ward. Social impact assessment of human exposure to mercury related to land use and physicochemical settings in the Alabama-Mobile river basin. 1998 – 2001. NSF/EPA/USDA. \$804,534.
  54. **Chaubey, I.**, L. Han, and S.N. Addy. Environmental and economic impact assessment of animal waste pollution potential using geographic information system. School of Mining and Energy Development, University of Alabama. 1998 – 1999. \$22,457.



## PUBLICATIONS

### Summary of Publications

a. Refereed	
i. Journal Articles	135
ii. Conference Proceedings	11
iii. Book Chapters	5
b. Invited Seminars:	60
c. Technical Papers/Conference Proceedings:	191
d. Papers Presented in Various Conferences:	25
e. Research Reports:	16
f. Other:	26

*Refereed Journal Articles (published or in print) (Respectively, <sup>1</sup>Graduate student; <sup>2</sup>Post doctoral Research Associate; <sup>3</sup>undergraduate student supervised by Dr. Chaubey):*

1. Femeena<sup>1</sup>, P.V., K.P. Sudheer, R. Cibin<sup>2</sup>, and **I. Chaubey**. 2018. Spatial optimization of cropping pattern for sustainable food and biofuel production with minimal downstream pollution. *Journal of Environmental Management* 212:198-209. <https://doi.org/10.1016/j.jenvman.2018.01.060>
2. Hou, T., T.R. Filley, T.D. Berry, S. Singh, M.N. Hughes, Y. Tong, A.N. Thanos Papanicolaou, K.M. Wacha, C.G. Wilson, and **I. Chaubey**. 2018. Control of tillage disturbance on chemistry and proportion of raindrop-liberated particles from soil aggregates. *Geoderma*. *Accepted*.
3. Guo, T., R. Cibin<sup>2</sup>, **I. Chaubey**, M. Gitau, J.G. Arnold, R. Srinivasan, J.R. Kiniri, and B. Engel. 2018. Evaluation of bioenergy crop growth and the impacts of bioenergy crops on streamflow, tile drain flow and nutrient losses in an extensively tile-drained watershed using SWAT model. *Science of Total Environment* 613:724-735.
4. Kling, C.L., **I. Chaubey**, R. Cibin, P.W. Gassman, Y. Panagopoulos. 2017. Policy implications from multi-scale watershed models of biofuel crop adoption across the corn-belt. *J. American Water Resources Association* 53(6):1313-1322.
5. Cibin<sup>2</sup>, R., **I. Chaubey**, R.L. Muenich, K.A. Cherkauer, P.W. Gassman, C.L. Kling. 2017. Influence of bioenergy crop production and climate change on ecosystem services. *J. American Water Resources Association* 53(5):1323-1335.
6. Gassman, P.W., A.M. Valcu-Lisman, C.L. Kling, S.K. Mickelson, R. Cibin, **I. Chaubey**, C.F. Wolter, and K.E. Schilling. 2017. Assessment of bioenergy cropping scenarios for the Boone River watershed in North Central Iowa, United States. *J. American Water Resources Association* 53(6):1336-1354.
7. Panagopoulos, Y., P.W. Gassman, C.L. Kling, R. Cibin<sup>2</sup>, and **I. Chaubey**. 2017. Assessment of large-scale bioenergy cropping scenarios for the Upper Mississippi and Ohio-Tennessee River basins. *J. American Water Resources Association* 53(6):1355-1367.
8. Liu, Y., B.A. Engel, D.C. Flanagan, M.W. Gitau, S.K. McMillan, and **I. Chaubey**. 2017. A review of effectiveness of best management practices in improving hydrology and water quality: needs and opportunities. *Science of the Total Environment* 601:580-593.
9. Hodaj, A., L.C. Bowling, J.R. Frankenberger, and **I. Chaubey**. 2017. Impact of a two-stage ditch on channel water quality. *Agricultural Water Management* 192:126-137.
10. Feng<sup>1</sup>, Q., **I. Chaubey**, B.A. Engel, R. Cibin, K.P. Sudheer, and J. Volenec. 2017. Marginal land suitability for switchgrass, Miscanthus, and hybrid poplar in the Upper Mississippi River basin

(UMRB). *Environmental Modelling and Software* 93:356-365.

11. Vema<sup>1</sup>, V., K.P. Sudheer, and **I. Chaubey**. Development of a hydrological model for simulation of runoff from catchments unbounded by ridge lines. 2017. *J. Hydrology*.
12. Li<sup>1</sup>, P., N. Omani<sup>2</sup>, **I. Chaubey**, X. Wei. 2017. Evaluation of drought implications on ecosystem services: Freshwater provisioning and food provisioning in the Upper Mississippi River basin. *International Journal of Environmental Research and Public Health*. 14(5):496.
13. Pignotti<sup>1</sup>, G., H. Rathjens<sup>2</sup>, C. Cibin<sup>2</sup>, **I. Chaubey**, M. Crawford. 2017. Comparative analysis of HRU and grid-based SWAT models. 2017. *Water* 9(4): 272.
14. Wang, R., L.C. Bowling, K.A. Cherkauer, R. Cibin<sup>2</sup>, Y. Her<sup>2</sup>, and **I. Chaubey**. 2017. Biophysical and hydrological effects of future climate change including trends in CO<sub>2</sub> in the St. Joseph River watershed, Eastern corn belt. *Agricultural Water Management* 180:280-296.
15. Her<sup>2</sup>, Y., **I. Chaubey**, J. Frankenberger, and J. Jeong. 2017. Implications of spatial and temporal variations in effects of conservation practices on water management strategies. *Agricultural Water Management* 180:252-266.
16. Feng<sup>1</sup>, Q., **I. Chaubey**, R. Cibin, B.A. Engel, K.P. Sudheer, and J. Volenec. 2017. Simulating establishment periods of switchgrass and Miscanthus in the Soil and Water Assessment Tool (SWAT). *Transactions of the ASABE* 60(5): 1621-1632.
17. Liu, Y., Li, S., C.W. Wallace, I. Chaubey, D.C. Flanagan, L.O. Theller, and B.A. Engel. 2017. Comparison of computer models for estimating hydrology and water quality in an agricultural watershed. *Water Resources Management* 1-25.
18. Sharma<sup>2</sup>, S. and **I. Chaubey**. 2017. Surface and subsurface transport of nitrate loss from the selected bioenergy crop fields: systematic review, analysis, and future directions. *Agriculture. In Press*.
19. Song, J., B. Gramig, R. Cibin<sup>2</sup>, and **I. Chaubey**. 2017. Integrated economic and environmental assessment of cellulosic biofuel production in an agricultural watershed. *BioEnergy Research* 10(2) 509-524. <http://doi.org/10.1007/s12155-017-9817-g>.
20. Bailey, R.T., H. Rathjens<sup>2</sup>, K. Bieger, **I. Chaubey**, and J. Arnold. 2017. SWATMOD-Prep: Graphical user interface for preparing coupled SWAT-MODFLOW simulations. *J. American Water Resources Association* 53(2): 400-410. <http://doi.org/10.1111/1752-1688.12502>.
21. **Chaubey, I.**, D.D. Bosch, R. Munoz-Carpena, R.D. Harmel, K. Douglas-Mankin, A.P. Nejadhashemi, P. Srivastava, and A. Shirmohammadi. 2016. Climate Change: A call for adaptation and mitigation strategies. *Transactions of the ASABE* 59(6):1709-1713. DOI: <http://doi.org/10.13031/trans.59.12138>.
22. Anandhi, N., N. Omani<sup>2</sup>, **I. Chaubey**, R. Horton, D. Bader, and R.S. Nanjundiah. 2016. What changes do the CMIP5 climate models predict for South Asia and what are some potential impacts on managed ecosystems and water resources? *Transactions of the ASABE* 59(6):1715-1731. <http://doi.org/10.12031/trans.59.11585>.
23. Athira, P., K.P. Sudheer, R. Cibin, and **I. Chaubey**. 2016. Predictions in ungauged basins: an approach for regionalization of hydrological models considering the probability distribution of model parameters. *Stoch. Environ. Res. Risk Assessment* 30(4):1131-1149. DOI: <http://doi.org/10.1007/s00477-015-1190-6>
24. Her, Y., **I. Chaubey**, J. Frankenberger, and J. Jeong. 2016. Implications of spatial and temporal variations in effects of conservation practices on water management strategies. *Agricultural Water Management* <http://dx.doi.org/10.1016/j.agwat.2016.07.004>

25. Wang, R., L.C. Bowling, K.A. Cherkauer, C. Raj<sup>2</sup>, Y. Her<sup>2</sup>, and **I. Chaubey**. 2016. Biophysical and hydrological effects of future climate change including trends in CO<sub>2</sub> in the St. Joseph River Watershed, Eastern Corn Belt. *Agricultural Water Management* <http://dx.doi.org/10.1016/j.agwat.2016.09.017>
26. Liu, Y, **I. Chaubey**, L.C. Bowling, V. Bralts, and B.A. Engel. 2016. Sensitivity and uncertainty analysis of the L-THIA-LID 2.1 model. *Water Resources Management* 30:4927-4949. DOI 10.1007/s11269-016-1462-z
27. Muenich, R.L., **I. Chaubey**, and M. Pyron. 2016. Evaluating potential water quality drivers of a fish regime shift using the SWAT model: a case study of the Wabash River. *Ecological Modeling* 340:116-125. <http://dx.doi.org/10.1016/j.ecolmodel.2016.09.010>
28. Bieger, K., H. Rathjens<sup>2</sup>, J.G. Arnold, **I. Chaubey**, and P. Allen. 2016. Development and comparison of multiple regression models to predict bankfull channel dimensions for use in hydrologic models. *J. American Water Resources Association* 52(6):1385-1400. DOI: 10.1111/1752-1688.12460
29. Li<sup>1</sup>, P., **I. Chaubey**, R. Muenich, and X. Wei. 2016. Evaluation of freshwater ecosystem provision in the Upper Mississippi River Basin: current status and drivers. *Water* 8(7), 288. Doi: <http://doi.org/10.3390/w8070288>
30. Tan, J., K.A. Cherkauer, and **I. Chaubey**. 2016. Developing a comprehensive spectral-biogeochemical database of Midwestern rivers for water quality retrieval using remote sensing data: A case study of Wabash River and its tributary, Indiana. *Remote Sensing* 8, 517. <http://www.mdpi.com/2072-4292/8/6/517>
31. Rathjens<sup>2</sup>, H., K. Bieger, **I. Chaubey**, J.G. Arnold, P.M. Allen, R. Srinivasan, D.D. Bosch, and M. Volk. 2015. Delineating floodplain and upland areas for hydrologic models – a comparison of methods. *Hydrological Processes* 30:4367-4383. DOI: 10.1002/hyp.10918
32. Cibir<sup>1</sup>, R. E. Trybula<sup>1</sup>, **I. Chaubey**, S. Brouder, and J.J. Volenec. 2016. Watershed scale impacts of bioenergy crops on hydrology and water quality using improved SWAT model. *Global Change Biology-Bioenergy* 8(4):837-848. DOI: <http://doi.org/10.1111/gcbb.12307>
33. Liu, Y., R. Cibir<sup>1</sup>, V. Bralts, **I. Chaubey**, L. Bowling, and B. Engel. 2016. Optimal selection and placement of BMPs and LID practices with a rainfall-runoff model. *Environmental Modelling and Software* 80:281-296. Doi: <http://doi.org/10.1016/j.envsoft.2016.03.005>
34. Denny-Frank, P.J., R.L. Muenich<sup>1</sup>, **I. Chaubey**, and G. Ziv. 2016. Comparing two tools for ecosystem service assessments regarding water resources decisions. *Environmental Management* 177:331-340. <http://doi.org/10.1016/j.jenvman.2016.03.012>
35. Tan, J, K.A. Cherkauer, **I. Chaubey**, C.D. Troy, and R. Essig. 2016. Water quality estimation of river plumes in Southern Lake Michigan using Hyperion. *J. Great Lakes Research* 42(3):524-535. <http://doi.org/10.1016/j.jglr.2016.02.009>
36. Muenich<sup>1</sup>, R.L., S. Peel, L.C. Bowling, M.H. Haas, R.F. Turco, J.R. Frankenberger, and **I. Chaubey**. 2016. The Wabash sampling blitz: A case study on the effectiveness of citizen science. *Citizen Science: Theory and Practice* 1(1),p.3. doi: <http://doi.org/10.5334/cstp.1>
37. Her<sup>2</sup>, Y, **I. Chaubey**, J. Frankenberger, and D. Smith. 2016. Effect of conservation practice implemented by USDA programs at field and watershed scales. *J. Soil and Water Conservation* 71(3):249-266. <http://doi.org/10.2489/jswc.71.3.249>
38. Trybula<sup>1</sup>, E.M., R. Cibir<sup>2</sup>, J.L. Burks, **I. Chaubey**, S.M. Brouder, and J. Volenec. 2015. Perennial rhizomatous grasses as bioenergy feedstock in SWAT: parameter development and model improvement. *Global Change Biology – Bioenergy* 7(6):1185-1202. DOI:

<http://doi.org/10.1111/gcbb.12210>

39. Tan, J., K.A. Cherkauer, and **I. Chaubey**. 2015. Using field and remotely sensed hyperspectral data to quantify water quality parameters in the Wabash River and its tributary, Indiana. *International Journal of Remote Sensing* 36(21): 5466-5484. <http://dx.doi.org/10.1080/01431161.2015.1101654>
40. Feng<sup>1</sup>, Q., **I. Chaubey**, Y. Her, R. Cibin, B. Engel, J. Volenec, and X. Wang. 2015. Hydrologic/water quality impacts and biomass production potential on marginal lands. *Environmental Modelling and Software* 72-230-238. Doi: <http://doi.org/10.1016/j.envsoft.2015.07.004>
41. Her<sup>2</sup>, Y. and **I. Chaubey**. 2015. Impact of the numbers of observations and calibration parameters on equifinality, model performance, and output and parameter uncertainty. *Hydrological Processes* 29(19):4220-4237. DOI: <http://doi.org/10.1002/hyp.10487>
42. Kalcic<sup>1</sup>, M.M., J. Frankenberger, **I. Chaubey**, L. Prokopy, and L. Bowling. 2015. Adaptive targeting: engaging farmers to improve targeting and adoption of agricultural conservation practices. *J. American Water Resources Association*. DOI: <http://doi.org/10.1111/1752-1688.12336>
43. Kalcic<sup>1</sup>, M.M., J. Frankenberger, and **I. Chaubey**. 2015. Spatial optimization of six conservation practices using SWAT in tile drained agricultural watersheds. *J. American Water Resources Association* DOI: <http://doi.org/10.1111/1752-1688.12338>
44. Cibin<sup>1</sup>, R., and **I. Chaubey**. 2015. A computationally efficient approach for watershed scale spatial optimization. *Environmental Modelling and Software* 66:1-11. <http://dx.doi.org/10.1080/21513732.2014.99871>
45. Park, Y.S., B.A. Engel, J. Kim, L. Theller, **I. Chaubey**, V. Merwade, K.J. Lim. 2015. A Web Tool for STORET/WQX Water Quality Data Retrieval and Best Management Practice Scenario Suggestion. *Journal of Environmental Management* 150:21-27. <http://dx.doi.org/10.1016/j.jenvman.2014.11.006>
46. Kalcic<sup>1</sup>, M.M., **I. Chaubey**, and J. Frankenberger. 2015. Defining Soil and Water Assessment Tool (SWAT) hydrologic response units (HRUs) by field boundaries. *International J. of Agricultural and Biological Engineering* doi: <http://doi.org/10.3965/j.ijabe.20150801.006>
47. Her<sup>2</sup>, Y., C. Raj<sup>2</sup>, and **I. Chaubey**. 2015. Application of parallel computing methods for improving efficiency of optimization in hydrologic and water quality modeling. *Applied Engineering in Agriculture* 31(3):455-468.
48. Her<sup>2</sup>, Y., J. Frankenberger, **I. Chaubey**, and R. Srinivasan. 2015. Threshold effects in HRU definition of Soil and Water Assessment Tool. *Transactions of the ASABE* 58(2):367-378. Doi: <http://doi.org/10.13031/trans.58.10805>
49. Logsdon<sup>1</sup>, R.A., M.M. Kalcic<sup>1</sup>, E.M. Trybula, **I. Chaubey**, and J.R. Frankenberger. 2015. Ecosystem services in Indiana agriculture: farmer and conservation perceptions. *International Journal of Biodiversity, Science, Ecosystem Services, and Management* doi: <http://doi.org/10.1080/2153732.2014.998711>
50. Thomas, M.A., L.M. Ahiablame<sup>1</sup>, B.A. Engel, and **I. Chaubey**. 2014. Modeling water quality impacts of growing corn, switchgrass, and *Miscanthus* on marginal lands. *Journal of Water Resources and Protection* 6,1352-1368. <http://dx.doi.org/10.4236/jwarp.2014.614125>.
51. Kalcic<sup>1</sup>, M.M., J. Frankenberger, L. Prokopy, and **I. Chaubey**. 2014. An in-depth examination of farmer perception of targeting conservation practices. *Environmental Management* 54:795-813. DOI: <http://doi.org/10.1007/s00267-014-0342-7>

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#### **Refereed Book Chapters:**

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### ***Invited Seminars:***

#### ***National/International Conferences:***

1. **Chaubey, I.** 2018. Can we address land use conflicts to live in harmony with water? Institute Lecture. Indian Institute of Technology – Roorkee, India. February 2018.
2. **Chaubey, I.** 2018. We all live downstream – watershed activities affect water quality and ecosystem services. Keynote Address at International Conference on Sustainable Technologies for Intelligent Water Management – IIT-Roorkee, India. February 2018.
3. **Chaubey, I.** 2018. Ecohydrologic impact assessment of bioenergy crop production. Indian Institute of Technology-Gandhinagar, India. January 10, 2018.
4. **Chaubey, I.** 2018. Development efforts in soil hydrology and instream water quality. Keynote address at the International SWAT Conference. IIT-Madras, India. January 10-12, 2018.
5. **Chaubey, I.** 2017. Integrated modeling science and techniques for water resources. Qinghai Normal University, Xining, China. October 28, 2017.
6. **Chaubey, I.** 2017. Engineering solutions to sustainable water management for food production. Keynote Address at the Annual Conference of Indian Society of Agricultural Engineers. Hisar, India. February 16, 2017.
7. **Chaubey, I.** 2017. Toward ecohydrologic assessment of bioenergy production. IIT Madras-Purdue University Seminary Series. IIT-Madras, Chennai, India. February 14, 2017.
8. **Chaubey, I., R. Cibin, and K.P. Sudheer.** 2016. SWAT Best Modeling Practices: Are we getting it right? Keynote address given at the International Soil and Water Assessment Tool Conference, Beijing Normal University, China. July 27, 2016.
9. **Chaubey, I. and R. Cibin.** 2016. Bioenergy-driven vulnerability and sustainability assessment in the Midwest USA. ASABE International Conference, Orlando, FL. July 20, 2016.
10. **Chaubey, I.** 2015. Toward ecohydrologic solutions of mixed land use watershed management challenges. Indian Institute of Technology-Delhi. December 30, 2015.
11. **Chaubey, I., R. Cibin, J. Frankenberger, J. Volenec, and S. Brouder.** 2015. Biofuel-induced land use change impacts on hydrology and water quality. American Geophysical Union., San Francisco, CA. December 18, 2015.
12. **Chaubey, I., R. Cibin, J. Frankenberger, J. Volenec, and S. Brouder.** 2015. Integrated assessment of bioenergy, land use, and climate change on ecohydrologic response. Joint International Conference of American Society of Agronomy, Crop Science Society of American, and Soil Science Society of America. Minneapolis. November 17.
13. **Chaubey, I.** 2015. Agricultural ecohydrology and watershed management. ASABE Natural Resources and Environmental System Distinguished Scholar Series. New Orleans, LA. July 27.
14. **Chaubey, I., R. Cibin, Y. Her, and J. Frankenberger.** 2014. Water quality modeling of biofuel land use and land management impacts. ASABE International Conference, Montreal, CA. July 15.
15. **Chaubey, I.** 2014. Connecting ecohydrology, ecosystem services, and biodiversity. *Keynote Address given at 2014 LAB Symposium on Biodiversity Without Boundaries. Kaohsiung, Taiwan. June 24.*
16. **Chaubey, I.** 2014. How do land use and climate change affect watershed sustainability? A Midwest USA perspective. *Keynote Address given at 2014 International Conference on Earth Observations and Societal Impacts. National United University, Miaoli. Taiwan. June 23.*

17. **Chaubey, I.**, 2014. Using models to improve water quality. University-Industry Consortium Fall Meeting, Jackson, MS. April 29-May 1.
18. **Chaubey, I.** 2013. Ecohydrologic impacts of land use, land management, and climate change in the Midwest USA. *Keynote Address given at the 2013 China-US Annual Workshop on Environmental Health and Green Development. Gatlinburg, TN. November 18-19.*
19. **Chaubey, I.** 2013. Bioenergy, landscape changes and ecosystem response: opportunities for sustainable watershed management. *Keynote Address given at the 47<sup>th</sup> Annual Convention of Indian Society of Agricultural Engineers (ISAE) and International Symposium on Bioenergy. Hyderabad, India. January 28-30, 2013.*
20. **Chaubey, I.**, R. Cibin, Y. Her, and K.P. Sudheer. 2012. Uncertainty in BMP evaluation and optimization for watershed management. *American Geophysical Union (AGU) Conference. San Francisco, CA. December 7, 2012.*
21. **Chaubey, I.** 2012. Sustainable watershed management under food, feed, and bioenergy production. Invited talk presented at the Joint China-U.S. Joint Symposium on “Land Use, Ecosystem Services, and Sustainable Development”. September 17-19. Shenyang, China.
22. **Chaubey, I.** 2012. Environmental management challenges from bioenergy, landscape changes, and ecosystem response: perspectives at global scale. *Keynote address at the 46<sup>th</sup> Annual Conference of the Indian Society of Agricultural Engineers. Pant Nagar, India. February 28, 2012.*
23. **Chaubey, I.** 2011. Sustainability assessment of bioenergy crop production, landscape changes, and ecosystem response. *Presented at EPA-ORD, Las Vegas. October 12, 2011.*
24. **Chaubey, I.** 2011. Scaling biomass production from field to watershed. *China-US 2011 Joint Symposium on Global Sustainability Issues in Energy, Climate, Water and Environment. Purdue University. September 25-28, 2011.*
25. **Chaubey, I.** 2011. Bioenergy, landscape changes and ecosystem response: Opportunities for sustainable watershed management. *Distinguished Lecture Series, Annual Conference of the ASAABE. Louisville, KY. August 7-10.*
26. **Chaubey, I.** 2011. Developing watershed management strategies for bioenergy crops. *6<sup>th</sup> Frontiers in Bioenergy US-Brazil Symposium on Sustainable Bioenergy. West Lafayette, IN. May 16-18, 2011.*
27. **Chaubey, I.**, C. Maringanti, B. Engel, and J. Quansah. 2010. Improving water quality from agricultural basins: a multiobjective optimization approach. *3<sup>rd</sup> International Perspective on Current and Future State of Water Resources and the Environment. IIT-Madras, Chennai, India. January 5-7, 2010.*
28. **Chaubey, I.** 2010. Agricultural ecohydrologic response evaluations using watershed models and tools”. *Ciclo Internacional de Conferencias de Hidrologia y Ambiente. Technical University of Panama. March 15-16, 2010.*
29. **Chaubey, I.** 2010. Standards for calibration and evaluation of models. *2010 Annual International Conference of the ASABE. Pittsburgh, PA. Dr. Chaubey was one of the four panel members invited to discuss this topic.*
30. **Chaubey, I.** 2010. Implications of bioenergy crop production on water quality. *China-US 2010 Joint Symposium on “Energy, Ecosystems, and Environmental Change”. Beijing, China. Sept 21-24, 2010.*
31. **Chaubey, I.** 2009. Integrated BMP assessment for improving water quality in a rice/soybean dominated watershed in the Arkansas Delta. *Water, Environment, Energy and Society Conference, New Delhi, India. January 12-16, 2009.*

32. **Chaubey, I.,** B. Engel, and M. Thomas. 2009. Impact of biofuel production on hydrology and water quality in Midwest USA. *US-China Workshop on the Climate-Energy Nexus. Oak Ridge, TN. November 11-13, 2009.*
33. **Chaubey, I.,** 2007. Can agricultural production and ecosystem integrity coexist: results from agricultural watersheds in USA. *10<sup>th</sup> Inter-Regional Conference on Water Resources. New, Delhi, India. October 17- 20, 2007.*
34. **Chaubey, I.,** 2005. A framework to stochastically evaluate watershed models”. *2<sup>nd</sup> Indian International Conference on Artificial Intelligence Applications. Pune, India. December 20-22, 2005.*
35. **Chaubey, I.,** 2005. Integrated ecosystem management: research advances, opportunities, and challenges in 21<sup>st</sup> Century. *Indian Agricultural Research Institute, New Delhi. December 13, 2005.*
36. **Chaubey, I.,** 2005. Identifying runoff source areas in a pasture dominated watershed. *Annual International Conference of the Soil and Water Conservation Society. Rochester, NY. August 2, 2005.*
37. **Chaubey, I.,** and T.C. Daniel 2004. Eucha/Spavinaw Phosphorus Index. *2004 SERA-17 Annual International Conference. New Bern, NC. June 20-22, 2004.*
38. **Chaubey, I.,** M.D. Matlock, and B.E. Haggard. 2003. Integrating physical, chemical, and biological response monitoring for watershed management: stream reach to watershed scale processes and lessons”. *2003 ASA-CSSA-SSSA Annual International Meeting. Denver, Colorado, November 2 – 6, 2003.*
39. **Chaubey, I.,** M.D. Matlock, B.E. Haggard, and T.A. Costello. 2003. Engaging stakeholders in watershed management process using a decision support system. *2003 ASA-CSSA-SSSA Annual International Meeting. Denver, Colorado, November 2 – 6, 2003.*
40. **Chaubey, I.,** 2002. How SWAT models phosphorus transport. *2002 SERA-IEG17 Annual Meeting. Fort Collins, CO. June 26, 27, 2002.*
41. **Chaubey, I.** 2001. Nonpoint Source Pollution and Water Quality: Issues and Opportunities. *Allahabad Agricultural Institute (Deemed University), India. May 22, 2001.*

***Regional:***

42. **Chaubey, I.** and R. Turco. 2013. Water and food security. *Borlaug Summer Institute on Global Food Security. Purdue University, West Lafayette, IN. May 28-June 8, 2013.*
43. **Chaubey, I.** 2009. Web-based load duration curves. *EPA Region 5 TMDL Practitioners’ Workshop. Redwing, MN. April 20, 2009.*
44. **Chaubey, I.,** M. Thomas, C. Maringanti, and B. Engel. 2009. Watershed scale environmental impact assessment of biofuel production in Midwest USA. *Second Generation Biofuels Symposium, May 18-19, 2009.*
45. **Chaubey, I.** 2008. BMP effectiveness assessment for a pasture dominated watershed: results from two years of CEAP assessment. *Improving Indiana Waters: Using Monitoring Data to Show Change. Indianapolis. December 3, 2008.*
46. **Chaubey, I.** 2006. Mathematical modeling of watershed processes. *Public Policy Symposium. Little Rock, AR. November 17, 2006.*
47. **Chaubey, I.** 2006. Modeling approaches to evaluate watershed and water quality processes. *Upper White River Water Quality Conference. Branson, MO. April 6, 2006.*

48. **Chaubey, I.** 2006. Water quantity/quality issues in the L'Anguille River watershed. *Arkansas Soil and Water Education Conference. Arkansas State University, Jonesboro. January 12, 2006.*
49. **Chaubey, I., R. Davis, and A. Apon.** 2005. Potential hydrologic and environmental applications for grid-enabled cyberinfrastructure. *University of Kansas. June 15, 2005.*
50. **Chaubey, I.** 2005. Development of a Decision Support System for Beaver Lake watershed. *Northwest Arkansas Water Quality Symposium, Rogers, AR. March 22, 2005.*
51. **Chaubey, I.** 2004. Water resources, sustainable agriculture, and economic development in Arkansas: an Ecological Engineering solution. *Rural Friendship Development Day conference. Fayetteville, AR. August 12, 2004.*
52. **Chaubey, I., S.S. Panda, K.L. Whitel, M. Matlock, B.E. Haggard, and T.A. Costello.** 2004. Beaver Lake watershed decision support system (BLWDSS). *2004 Arkansas Water Resources Center Conference. Fayetteville, April 20-21, 2004.*
53. **Chaubey, I., D. Sahoo, B.E. Haggard, K.L. White, and M. Matlock.** 2003. Assessment of Nutrient Dynamics in an Agriculturally Dominated Stream. *Arkansas Water Resources Conference Center Conference on Quality Water Resources to Meet Our Competing Needs. Fayetteville, AR. April 22 – 23.*
54. White, K.L., and **I. Chaubey.** 2003. Demonstration of SWAT Model Using Beaver Lake Watershed". *Arkansas Water Resources Center Conference on Quality Water Resources to Meet Our Competing Needs. Fayetteville, AR. April 22 – 23.*
55. Haggard, B.E., **S.A. Ekka,** M. Matlock, P.A. Moore, jr., and **I. Chaubey.** 2003. Release of Phosphorus from Stream and Reservoir Sediment: Effect of Chemical Amendments. *Arkansas Water Resources Conference Center Conference on Quality Water Resources to Meet Our Competing Needs. Fayetteville, AR. April 22 – 23.*
56. **Chaubey, I.** 2002. Total maximum daily loads. Phosphorus Management Workshop. *Division of Agriculture, University of Arkansas. October 15, 2002.*
57. **Chaubey, I.** 2002. Quantification of runoff and nutrient load prediction uncertainty due to GIS data resolution. *2002 Annual Arkansas Water Resources Center Conference. April 23-24, 2002.*
58. White, K.L., **I. Chaubey,** and M. Nelson. 2002. SWAT Modeling of the Illinois River Drainage Area in Arkansas". *2002 Annual Arkansas Water Resources Center Conference. April 23-24, 2002.*
59. Haggard, B.E., M. Matlock, and **I. Chaubey.** 2002. Stream Nutrient Retention in the Illinois River, Northwest Arkansas: Ecological Services and Water-Quality Criteria. *2002 Annual Arkansas Water Resources Center Conference. April 23-24, 2002.*
60. **Chaubey, I.** and D. Storm. 2002. Watershed modeling and its role in developing water quality standards. *University of Arkansas – Oklahoma State University Joint Conference on Collaborative Environmental Research. Tulsa, OK. December 19, 2002.*

**Technical Papers/Proceedings presented at national/international conferences** (<sup>1</sup>Graduate student; <sup>2</sup>Post doctoral Research Associate; <sup>3</sup>undergraduate student supervised by Dr. Chaubey):

1. Li<sup>1</sup>, P., R.L. Muenich<sup>1</sup>, **I. Chaubey,** and X. Wei. 2017. Evaluating BMP effectiveness in improving freshwater provisioning under changing climate in the Upper Mississippi River basin. EGU General Assembly Conference, Vienna, Austria. Abstract No. 19,1146.
2. **Femeena<sup>1</sup>, P.V., Chaubey, I.,** Fohrer, N., Wagner, P.D. 2017. Improved physical representation of in-stream processes for water quality models using tracer studies. Presented at American

Society of Agricultural and Biological Engineering Annual International Meeting, Spokane, Washington USA (July 16-19, 2017).

3. **Femeena<sup>1</sup>, P.V., Chaubey, I.**, Aubeneau, A., McMillan, S., Wagner, P.D., Fohrer, N. (2017). Regression models to estimate transient storage parameters in streams. Presented at Agricultural and Biological Engineering Graduate Industrial and Research Symposium, Purdue University, Indiana, USA (Feb 8, 2018).
4. Singh<sup>2</sup>, S., Abebe, A., Srivastava, P., **Chaubey, I.**, 2017. Modulation of ENSO by decadal and multi-decadal climatic cycles and its impact on streamflow levels across USA. *ASABE, Annual International Meeting, July 2017, Spokane, USA.*
5. Pignotti<sup>1</sup>, G., Singh<sup>2</sup>, S., Femeena<sup>1</sup>, P. V., **Chaubey, I.**, Cherkauer, K., 2017. Climate Change Impacts on Indiana Water Quality, *38th Annual Indiana Water Resources Association Symposium, June, 2017, Indiana.*
6. Pignotti<sup>1</sup>, G., **Chaubey, I.**, Crawford, M. “Comparing soil hydrology schemes in watershed-scale ecohydrologic modeling.” *ASABE 2017 Annual International Meeting.* Spokane, WA. July 2017.
7. Vamsikrishna, V., K.P. Sudheer, and **I. Chaubey.** 2017. Hydrological simulation in administrative catchments in participatory watershed management. 3<sup>rd</sup> International Conference on Status and Futures of the World’s Large Rivers. April 18-21, New Delhi, India.
8. Rathjens, H., K. Bieger, **I. Chaubey**, J.G. Arnold, P. Allen, R. Srinivasan, and M. Volk. 2016. Evaluation of upland-floorplain delineation methods across scales and DEM resolution. *ASABE Annual International Meeting. Orlando, FL. July 17-20, 2016.*
9. Pignotti, G., H. Rathjens, R. Cibin, **I. Chaubey**, and M. Crawford. 2016. Sensitivity and skill of SWAT model soil water content dynamics. *ASABE Annual International Meeting. Orlando, FL. July 17-20, 2016.*
10. Cibin, R., **I. Chaubey**, and B. Gramig. 2016. Conservation practice strategies for economically and environmentally sustainable corn stover harvest for biofuel production in Indiana. *ASABE Annual International Meeting. Orlando, FL. July 17-20, 2016.*
11. Omani, N., **I. Chaubey**, S. Sharma. 2016. Assessing sensitivity of two Indiana River basins water quality, quantity, and agriculture to drought. *ASABE Annual International Meeting. Orlando, FL. July 17-20, 2016.*
12. Krishnan, N., R. Cibin, **I. Chaubey**, and K.P. Sudheer. 2015. Impact of parameter uncertainty in land use planning decisions. Poster presented at the American Geophysical Union Conference. San Francisco, CA. December 18, 2015.
13. Hodaj, A., L.C. Bowling, R. Cibin, and **I. Chaubey.** 2015. Evaluation of the two-stage ditch as a best management practice. Poster presented at the American Geophysical Union Conference. San Francisco, CA. December 18, 2015.
14. Cibin<sup>2</sup>, R., **I. Chaubey**, M. Helmers, K.P. Sudheer, M. White. J. Arnold. 2015. Improved physical representation of vegetative filter strips in SWAT. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
15. Pignotti<sup>1</sup>, G., H. Rathjens, R. Cibin, V. Vema, **I. Chaubey**, and M. Crawford. 2015. Comparative analysis of spatial resolution effects on standard and grid-based SWAT models. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
16. Omani<sup>2</sup>, N., **I. Chaubey**, and P. Li. 2015. Assessing sensitivity of UMRB agriculture and water resources to past and current drought. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*



17. Hodaj, A., Bowling, L., R. Cibin, and **I. Chaubey**. 2015. Evaluation of the two-stage ditch as a best management practice. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
18. Feng<sup>1</sup>, Q., **I. Chaubey**, R. Cibin, B. Engel, K.P. Sudheer, and J. Volenec. 2015. Bioenergy grass production on marginal lands and hydrologic and water quality impacts in the Upper Mississippi River Basin (UMRB). *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
19. Pignotti<sup>1</sup>, G., R. Cibin<sup>2</sup>, **I. Chaubey**, and M. Crawford. 2015. Evaluation of SWAT soil water content model output and sensitivity. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
20. Femeena<sup>1</sup>, P.V., **I. Chaubey**, and N. Fohrer. 2015. Developing an in-stream water quality model for improved simulation of nutrient dynamics in SWAT. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
21. Li, P., **I. Chaubey**, N. Omani, and X. Wei. 2015. Impact of drought on freshwater provisioning ecosystem services in the Upper Mississippi River basin. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
22. Papanagopoulos, Y., P. Gassman, C. Kling, R. Cibin<sup>2</sup>, **I. Chaubey**, J. Arnold. 2015. Assessment of large scale bioenergy cropping scenarios for the Upper Mississippi and Ohio-Tennessee River basins. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
23. Gassman, P., A. Valcu, C. Kling, Y. Panagopoulos, R. Cibin<sup>2</sup>, **I. Chaubey**, J.G. Arnold, C. Wolter, and K. Schilling. 2015. Assessment of bioenergy cropping scenarios for the Boone River watershed in North Central Iowa, United States. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
24. **Chaubey, I.**, R. Cibin<sup>2</sup>, S. Brouder, L. Bowling, K. Cherkauer, J. Frankenberger, R. Goforth, B. Gramig, J. Volenec. 2015. How do climate change and bioenergy crop production affect watershed sustainability. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
25. Feng<sup>1</sup>, Q., **I. Chaubey**, R. Cibin<sup>2</sup>, B. Engel, K.P. Sudheer, J. Volenec. 2015. Simulating establishment period of perennial bioenergy grasses in the SWAT model. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
26. Krishnan, N., R. Cibin<sup>2</sup>, **I. Chaubey**, and K.P. Sudheer. 2015. Impact of model parametric uncertainty on land use planning decision making. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
27. Moloney, C., R. Cibin<sup>2</sup>, J. Frankenberger, and **I. Chaubey**. 2015. Using a single HRU SWAT model to examine and improve representation of field scale processes. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
28. Song, J., B. Gramig, R. Cibin<sup>2</sup>, and **I. Chaubey**. 2015. Water quality and cost considerations in the supply of feedstocks for cellulosic biofuels. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
29. Bieger, K., H. Rathjens<sup>2</sup>, **I. Chaubey**, D. Bosch, P.M. Allen, M. Volk, R. Srinivasan, and J.G. Arnold. 2015. SWAT+: Introduction to the new SWAT code, input/output file structure, test datasets, and developers interface. *International Soil and Water Assessment Tool Conference, West Lafayette, IN. October 14-16, 2015.*
30. Pignotti<sup>1</sup>, G., H. Rathjens<sup>2</sup>, R. Cibin<sup>2</sup>, V. Vema, **I. Chaubey**, and M. Crawford. 2015. Effect of

input data spatial resolution on output and calibration of standard and grid-based SWAT model simulations. *Paper No. 152151725. ASABE Annual International Conference. New Orleans, LA. July 2015.*

31. Cibin<sup>2</sup>, R., **I. Chaubey**, and B.M. Gramig. 2015. Watershed scale analysis to develop strategies for environmentally sustainable corn stover removal for biofuel production in Indiana. *Paper No. 152190927. ASABE Annual International Conference. New Orleans, LA. July 2015.*
32. Montgomery<sup>1</sup>, A.K., R. Dierking, S. Brouder, I. Chaubey, J. Volenec. 2015. The effects of different biofuel crops and fertilizer rates on subsurface water quality and yield on marginal lands. *Paper No. 152189916. ASABE Annual International Conference. New Orleans, LA. July 2015.*
33. Rathjens<sup>2</sup>, H., K. Bieger, **I. Chaubey**, J.G. Arnold, R. Srinivasan, D.D. Bosch, P. Allen, M. Volk. Development of a landscape unit delineation framework for SWAT. *Paper No. 152189799. ASABE Annual International Conference. New Orleans, LA. July 2015.*
34. Bieger, K., H. Rathjens, P. Allen, D.D. Bosch, **I. Chaubey**, R. Srinivasan, M. Volk, J.G. Arnold. Application of the new modular SWAT code to three watersheds in the United States. *Paper No. 152189807. ASABE Annual International Conference. New Orleans, LA. July 2015.*
35. Liu, Y., R. Cibin, V. Bralts, **I. Chaubey**, B. Engel. 2015. Optimal selection and placement of BMPs and LID practices with L-THIA-LID 2.1 Model. *Paper No. 152141175. ASABE Annual International Conference. New Orleans, LA. July 2015.*
36. Hodaj, A., L.C. Bowling, J. Frankenberger, and **I. Chaubey**. 2015. Two-stage ditch scenarios and its future role as a best management practice. *Paper No. 152188680. ASABE Annual International Conference. New Orleans, LA. July 2015.*
37. Cibin<sup>2</sup>, R., **I. Chaubey**, E. Trybula, J. Volenec, S. Brouder, and J. Arnold. 2015. SWAT model improvements to simulate bioenergy crops production. *International Soil and Water Assessment Tool Conference, Sardinia, Italy. June 24-26, 2015.*
38. **Chaubey, I.**, R. Cibin, J. Frankenberger, J. Volenec, S. Brouder, P. Gassman, Y. Panagopoulos, C. Kling, J. Arnold. 2015. Application of improved SWAT model for bioenergy production scenarios in Indiana Watersheds. *International Soil and Water Assessment Tool Conference, Sardinia, Italy. June 24-26, 2015.*
39. Gassman, P., Adriana Valcu, C. Kling, Y. Panagopoulos, R. Cibin, **I. Chaubey**, J. Arnold. 2015. Assessment of Scenarios for the Boone River Watershed in North Central Iowa. *International Soil and Water Assessment Tool Conference, Sardinia, Italy. June 24-26, 2015.*
40. Y. Panagopoulos, Y., P. Gassman, C. Kling, R. Cibin, **I. Chaubey**, J.G. Arnold. 2015. Assessment of large-scale scenarios for the Upper Mississippi and Ohio-Tennessee River basins. *International Soil and Water Assessment Tool Conference, Sardinia, Italy. June 24-26, 2015.*
41. Srinivasan, R., H. Rathjens, C. George, **I. Chaubey**, J. Arnold, K. Abbaspour. 2015. A global SWAT model. *International Soil and Water Assessment Tool Conference, Sardinia, Italy. June 24-26, 2015.*
42. Cibin R., R. Logsdon, **I. Chaubey**, K.A. Cherkauer (2015). Ecosystem services evaluation of futuristic bioenergy based land use change and their uncertainty from climate change and variability. ASABE 1st Climate Change Symposium-Adaptation and Mitigation - Chicago, Illinois, May 3-5, 2015, Paper number 152121620, (doi: 10.13031/cc.20152121620)
43. Rathjens H., Cibin R., **Chaubey I.**, Srinivasan R., Arnold J. (2015). Linking regional climate simulations and hydrologic models for climate-change impact studies: a data processing framework. ASABE 1st Climate Change Symposium-Adaptation and Mitigation - Chicago, Illinois, May 3-5, 2015, Paper number 152121620, (doi: 10.13031/cc.20152121620).

44. Montgomery, A., R. Wang, S. Brouder, **I. Chaubey**, and J. Volenec. Effect of cellulosic biofuel crops grown on marginal land. ASABE Annual International Conference. Montreal, Canada. July 2014.
45. Kalcic, M., Frankenberger, **J., Chaubey**, I., Prokopy, L., and L. Bowling. An adaptive targeting approach for adoption of agricultural conservation practices. 21st Century Watershed Technology Conference and Workshop: Improving Water Quality and the Environment. The University of Waikato, New Zealand, November 3 - 6, 2014.
46. **Chaubey, I.**, R. Cibin, J. Frankenberger, and K. Cherkauer. 2014. Watershed scale environmental and biodiversity sustainability analysis of land use and climate change using SWAT model. Presented at the 2014 International SWAT Conference, July 30 – August 1, 2014. Porto de Galinhas, Brazil.
47. Chicklowski<sup>1</sup>, E., **I. Chaubey**, J. Frankenberger, and L. Bowling. 2014. Nitrate removal from subsurface drainage by denitrifying bioreactor. Poster presented at the 2014 International Annual Meeting, American Society of Agricultural and Biological Engineers. Montreal, CA.
48. Hodaj, A, L.C. Bowling, J. Frankenberger, **I. Chaubey**, and R.R. Goforth. 2014. Monitoring a two-stage ditch and its impacts on water quality. ASABE Paper No. 141913124. Presented at the 2014 International Annual Meeting, American Society of Agricultural and Biological Engineers. Montreal, CA
49. **Chaubey I.**, R. Cibin, and L. Chiang. 2013. Watershed scale impacts of bioenergy, landscape changes, and ecosystem response. *European Geophysical Union General Assembly Conference (7-12 April), Vienna, Austria.*
50. Cibin R., I. Chaubey, K.P. Sudheer, M.J. White, and J.G. Arnold 2013. Optimal Applicability of growing energy crops as BMPs in filter strip areas. *American Society of Agricultural and Biological Engineers Annual International Meeting (Jul 22 - 24), Kansas City, Missouri, U.S.A.*
51. Cibin R., **I. Chaubey**, S. Brouder, J. Volenec, and K. Cherkauer K. 2013. Watershed scale environmental sustainability analysis of biofuel production in changing land use and climate scenarios. *American Geophysical Union Fall Meeting (December 9 - 13), San Francisco, California, U.S.A.*
52. Femeena, P. V., K.P. Sudheer, **I. Chaubey**, R. Cibin, and Y. Her. 2013. Spatial optimization of cropping pattern in an agricultural watershed for food and biofuel production with minimum downstream pollution. *American Geophysical Union Meeting of the Americas (May 14-17), Cancun, Mexico.*
53. Feng, Q., **I. Chaubey**, X. Wang, Y. Her, and C.W. Boles. 2013. Hydrological/water quality impacts of perennial crop production on marginal land. *ASABE Annual International Meeting (July 21-24), Kansas City, Missouri, U.S.A.*
54. Her, Y., I. Chaubey, and J. Frankenberger. 2013. Assessing effectiveness of targeted agricultural BMPs on sediment and nutrient loading from Upper Maumee River Watershed using SWAT. *56th Annual Conference on Great Lakes Research (June 2-6), West Lafayette, Indiana, U.S.A.*
55. Her, Y., R. Cibin, and **I. Chaubey**. 2013. Simple parallel computing methods for improving efficiency of parameter calibration of SWAT and its application to spatial optimization. *ASABE Annual International Meeting (July 21-24), Kansas City, Missouri, U.S.A.*

56. Sharma, S., **I. Chaubey**, and R. Cibin. 2013. Impact of Bioenergy Crops Expansion on Water Quality in Agricultural Regions of Indiana. *American Society of Agricultural and Biological Engineers Annual International Meeting (Jul 22 - 24), Kansas City, Missouri, U.S.A.*
57. **Chaubey I.**, R. Cibin, Y. Her, and B.M. Gramig. 2013. Is Co-Production of Food and Energy Crops Environmentally Sustainable? A Land Use Optimization Approach. *American Water Resource Association 2013 Spring Specialty Conference on Agricultural Hydrology and Water Quality II (Mar25-27), St.Louis, Missouri, U.S.A.*
58. Ahiablame, L., Engel, B., **Chaubey, I.** 2012. Effectiveness of Low Impact development Practices: Retrofitting with Rain Barrel/Cistern and Porous Pavement. *Presented at The ASABE Annual International Meeting, Dallas, Texas.*
59. **Chaubey, I.**, R. Cibin, Y. Her, and B. Gramig. 2012. Optimizing selection and landscape placement of energy crops. *Annual Conference of the American Water resources Association. Jacksonville, FL.*
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2. **Chaubey, I.** 2011. Toward sustainability assessment of bioenergy production, landscape changes and ecosystem response. Department of Earth and Atmospheric Sciences Seminar Series. Purdue University. September 22, 2011.
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2. Technology helps farmers, animal processors preserve water quality. Water Environment Federation Waste Water Technology. Fall 2000.
3. CAST gets all wet. University of Arkansas Research Frontiers. Fall 2002.
4. Taking a SWAT at water quality models. University of Arkansas news release, July 2, 2002.
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6. UA teams build models for uses of state's water. Arkansas Democrat Gazette. November 28, 2003.
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8. Phosphorus Index picked for Eucha-Spavinaw Watersheds. The Morning News.
9. Study shows more corn for biofuels would hurt water. Purdue University News Release. September 28, 2009. This news article was further published more than 100 news outlets including the US News and World Report, Resource, and Science Daily
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12. Our cresting water crisis. Purdue Engineering Impact magazine. Winter 2009. Pp 12-17.
13. Purdue getting nearly \$1.6 million for biofuels crop research. Purdue University News Release. September 16, 2010.